

ABSTRACT OF THE DISCLOSURE

A process is provided wherein a metal powder of iron or low alloy steel is mixed with a lubricant having a characteristic of becoming liquid under pressure and of evaporating under a sintering temperature and at least one liquid phase former to form a mixture. The mixture is compressed at a pressure sufficient to liquefy and uniformly distribute the lubricant within the compressed mixture with the lubricant effecting a uniform distribution of the liquid phase former on the particles of the metal powder. Upon sintering, the lubricant is evaporated and driven off and a liquid phase sintering of the liquid phase former with the particles of the metal powder occurs to obtain a product having a density of 99+% of theoretical density.

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